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RHODE ISLAND MEDICAL SOCIETY

Annual Meeting, Newport, R. I., May 28-29, 1941

AMERICAN MEDICAL ASSOCIATION

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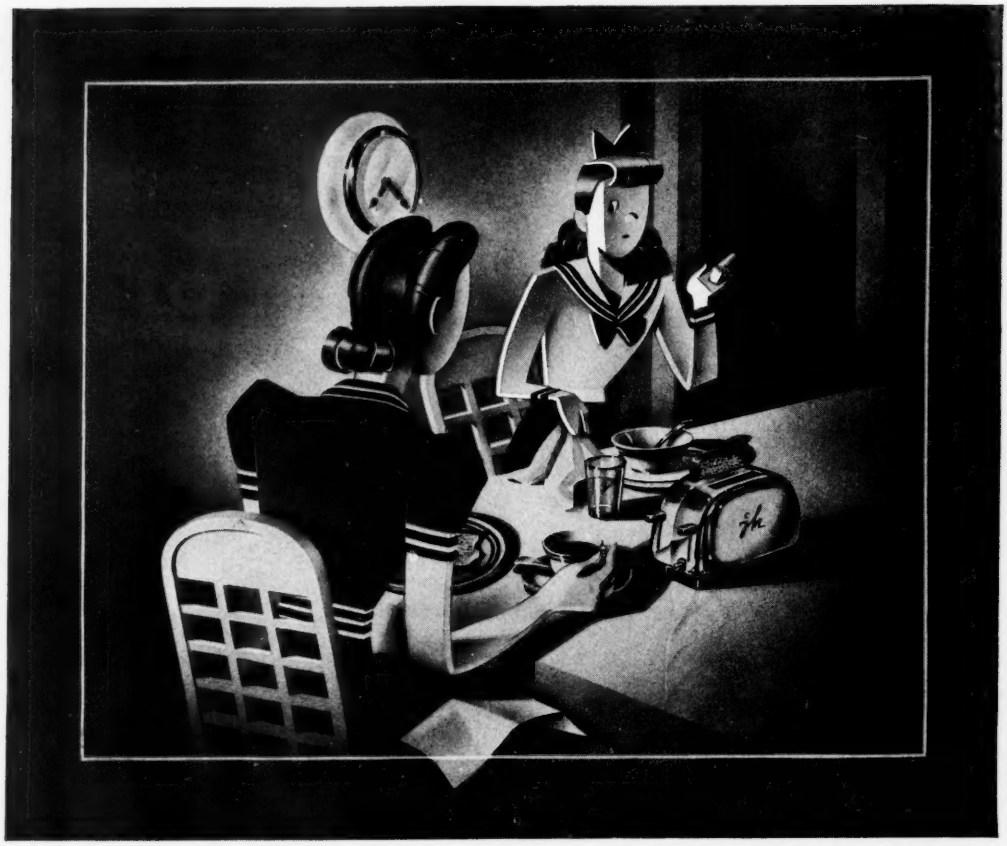

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THE RHODE ISLAND MEDICAL JOURNAL

Volume XXIV MARCH, 1941 Number 3

NUTRITIONAL ASPECTS OF PREGNANCY

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In looking over numerous old obstetrical text books of the past hundred years, the standard books of their day, it has been interesting to note the unanimity of thought and the meagerness of expression of their authors on the subject of nutrition in pregnancy. Typical of the brief treatment accorded this subject is that of Lusk who wrote that "the dietary should embrace all nutritious and easily digested articles of food." Winkle as translated by Edgar was more verbose in saying that "the quantity of nourishment should be moderate, . . . the food should not be too rich, though not lacking in quality. It should be divided up into a greater number of meals." Cragin as recently as 1917 covered the subject by suggesting that the patient be allowed to select her diet according to her taste "which will often vary greatly from that when she is not pregnant."

These authors agreed that the diet in pregnancy should be ample in quantity and adequate in quality, and with that very broad generality the student or practitioner was left to decide for himself and for his patients what "adequate in quality and ample in quantity" meant. Perhaps, after all, that advice was not so bad for those days. We are better able to define or amplify those terms only because of the work of hundreds of investigators since their day. Of our alphabetical knowledge of the vitamins, of our relatively recent and still very scanty knowledge of blood and tissue chemistry, and of cellular physiology our grandfathers knew little or nothing. However, in those days food was food. Food was then quite likely to be what it appeared to be. Bread was a real staff of life which could be leaned on and not the frail prop which too often passes by the name of bread today.

Moralists, economists, sociologists, and anthropologists have a way of harking back to a Golden Age when the world was young, when man and his surroundings were natural and unspoiled, when all things were as we imagine they should be. We know that there never was such an age. We know that primitive man was a pretty horrible creature, ugly, hairy, and but little above the beasts with whom he often had a difficult struggle for a place in the sun or a place at the dinner table. But what food this Peiping-Java-Piltdown-Neanderthal individual was able to knock down, ensnare or uproot was not robbed of its nutrient properties by refining, degerminating, polishing, pasteurizing, sulphurizing, gassing, or otherwise despoiling before it was eaten. And his taste though it was primitive or because it was primitive was to be relied on. His vitamins were not boiled out of his vegetables and poured down the sink. His meat eating habits would not permit him to get by in any modern society except perhaps among the Hottentots for he did not discard anything but the horns, hoofs, and bones, and he even picked the marrow from these. The blood and parenchymatous organs upon which we turn our backs or even our stomachs were his choicest cuts, and we know that from a nutritional standpoint he was wise in his omnivorousness. Habit and custom, local or racial, have often worked to civilized man's dietary disadvantage.

Our anthropological confreres tell us that as anatomical specimens we are not as good as we used to be in the brave days of old when man was subject to the laws of natural selection and the survival of the fittest. Civilization is said to have thrown a monkey-wrench into the machinery of evolution. Tastes are now no more to be trusted than are the foods upon which we may exercise these tastes.

Pregnancy, you may say, and I will agree with you, is a normal physiological function. Why then do the dietary requirements of this normal function merit our special consideration? In the first place, the patient's food habits may never have been good. The patient for economic reasons may not have free choice in her diet. Because of anorexia or vomiting she may not take or retain sufficient food. During pregnancy some of the normal physiological functions border closely upon the pathological. In the second place the pregnant patient is unique in that she harbors a parasite, the

Given at Providence Lying-In Hospital, February 7, 1940.

growing fetus. We are concerned not only with the dietary requirements of the host but with those of her guest. The patient may be in metabolic balance normally but not when the fetal requirements are added. The situation is further complicated by the fact that as the fetus develops its requirements of food for growth, for energy, and for storage change.

In our discussion we shall assume that the mother is able to assimilate the food she eats. If she is unable to do this, even if eating in abundance, it is as though she were on an inadequate diet. In this case the fetus does not suffer from want though the mother may, for it is parasitic and has first claim on what food is ingested or has been stored in the maternal organism. We must also assume that the placenta is normal and able to function in transmitting all the food elements from the maternal to the fetal circulation. Otherwise, in spite of an abundance of food material circulating in the maternal blood-stream, the fetus will be malnourished.

During the first three months of pregnancy there is a slight fall in the basal metabolism. Thereafter the metabolic rate slowly increases. This increase is probably chiefly due to the additional tissue of the fetus, and to a smaller degree to the increased mass of maternal tissue. The increase in rate is variously given but seems to be in proportion to the fetal surface and to reach a maximum of plus 25 shortly before the end of pregnancy. The gain in weight in pregnancy averages about 18%. If this were an ordinary gain in weight it would account for only about 5 of the increased metabolic rate. The rest of the plus 25 is due to the fetal tissues and the adnexae of the mother which have a higher specific metabolism per unit of weight.

In other words, a woman needs more food when pregnant. By some of her doting and ill-advised relatives she is told that she must now eat for two. She is told by others that she must eat sparingly to keep the baby small. Both admonitions are wrong. I may disgress for a moment to lay the ghost of Prochownick's diet. If ever there was an instance of one swallow's making a summer this is it. From an impressive series of three patients whose intake of food he greatly restricted in the last six to ten weeks of their pregnancies Prochownick deduced that by cutting down on the mother's food for the last two months of pregnancy the baby's weight at birth could be kept below average. This can be disproved no more conclusively than by what may be regarded as an unintentional experiment on a large scale in 1914. The experiment is now being repeated. With the whole population on a restricted diet during the war, German babies did not show the lowered birth weight which Prochownick had decreed would result. In this they were only true to their parasitic role. Probably much harm has resulted from such restricted diets. However, if the mother is overnourished, or if, as in the case of an uncontrolled diabetic with elevated blood sugar, there is an overabundance of available nourishment, the fetus is very likely to be overnourished and overweight. For this and other reasons, the esthetic being the one that the patient is most likely to pay heed to, the patient's weight should be kept within the average gain of eighteen to twenty-two pounds, unless she is underweight at the start. During pregnancy the patient needs more of every type of food, but especially more of the energy foods, of proteins, of vitamins, and of the minerals, calcium, phosphorous, and iron. A good distribution is protein 15%, fat 25%, and carbohydrate 60%.

The PROTEINS should preferably be those of high biological value, the complete proteins, containing all the amino acids. These are especially the animal proteins, meat and milk. Gelatine which is being touted as a pep food is of the type of incomplete proteins which lack certain of the amino acids required for growth. Proteins are needed to maintain the nitrogen balance, to maintain the loss of maternal tissues, to furnish the nitrogenous elements for fetal growth, and to build up a protein reserve for the increased demands of lactation. A daily intake of 0.5 to 0.7 grams per kilo of body weight is necessary although a more generous 1.0 gram per kilo is better. Protein eaten is spared by combining with adequate energy foods.

Except in the case of those nephritics with nitrogenous retention in the blood there is no good reason to limit the intake of protein below the patient's customary habits if these are normal. In fact, the patient with albuminuria has probably been malnourished in the past by such restriction and has had a secondary anemia added to her other troubles. Such protein restriction results in serious disturbance of serum protein constituents. Strauss has contended that a low protein diet might even be the cause or contribute to the toxemia of pregnancy because he found that such toxic edematous patients had a low serum protein and were benefited

by a high protein diet with vitamin B_1. Diekmann has not been able to duplicate these findings and results except in patients with nephrosis. To show the swing of the pendulum away from protein restriction in a dramatic way I can recall a patient, a violent eclamptic, whose convulsions were controlled by sedation and dehydration who on the day following delivery when she had roused from coma, ate with enjoyment and no ill effects a steak which would have satisfied a stevedore. To have permitted that twenty years ago, would have been considered malpractice.

In the first trimester the ingestion of CARBOHYDRATES frequently and in small amounts seems more than any other measure to control the nausea and vomiting of early pregnancy. Why this is so I do not fully understand. The metabolism then is no higher or is even slightly lower than normal and the energy requirements would not seem to be increased. At any rate, empirically it is true that such patients are helped. Of course, in the presence of an acidosis from starvation or severe vomiting there is rational ground for the use of sugars and starches. There does appear to be a disturbance of carbohydrate metabolism in pregnancy. A glycosuria is then easily induced. A sufficient amount of carbohydrate in the diet acts to spare the more expensive and more necessary proteins.

FATS appear to play no role in pregnancy except to supply energy and to act as carrier of vitamins A, D, E and F. An overabundance probably does nothing to the patient but make her and her baby obese.

Our knowledge of the next group of foods to demand attention, the VITAMINS, is still hardly beyond the stage of empiricism. Our patients often, and the detail men of the medical supply houses always, know as much or more about these food elements than we do.

Of vitamin A, we can say that it influences fertility and hence, in a roundabout way, is of importance in pregnancy, that it aids growth, and that the body's resistance to infection, especially when attacked through the mucous membrane, is aided by this element. It is found chiefly in green vegetables. In pregnancy 9,000 units are recommended daily. A good diet averages about 3,000 units which would seem to indicate that all pregnant women average only one-third of their needed vitamin A.

Vitamin B_1, thiamin, the anti-neuritic factor, seems to be important in carbohydrate metabolism. With the increase of carbohydrate in early pregnancy to control nausea the B_1 in the diet should be increased. This vitamin appears to aid the anorexia of early pregnancy and to tone up the intestinal tract. It is specific in the polyneuritis of severe cases of hyperemesis and may be given parenterally when not tolerated by mouth. In lactation it is essential and five times the normal amount is said to be optimum then. Vitamin B_1 is chiefly found in leafy vegetables, legumes, tomatoes, citrus fruits, yeast, glandular meats, egg yolk, and whole wheat breads.

Vitamin C, ascorbic acid, influences the development of the infant's bones and teeth. When the mother's diet is deficient in this factor, the baby may be born with scurvy. This vitamin is found in leafy vegetables, uncooked cabbage, citrus fruits, and tomatoes. 75 mg. daily or 1,500 international units is the daily intake which is considered desirable.

Vitamin D, calciferol, the sunshine vitamin, maintains or controls the normal calcium and phosphorus metabolism of mother and fetus. Calcium deficiency, premature births, and birth trauma seem to be associated often. The soft skull of the poorly ossified premature baby, instead of making birth easier and safer because of ease of molding, does the opposite. Birth injuries are more frequent among these premature infants. At least the normal degree of ossification seems to make birth safer. During the months of June, July and August in this latitude the ultraviolet light of sunshine is efficient in forming this vitamin within the body by its action on the skin. It is found in egg yolk, fatty fish, and in some fish oils. 350 to 400 units daily are normal requirements.

Vitamin E, alpha tocopherol, the anti-sterility vitamin, may have some value, or at least has been advocated, for use in cases of sterility or infertility, in habitual abortion, and even in premature separation of the placenta. This vitamin is so widespread in foods that its lack seems improbable as a cause of early fetal death. Through a specific action on the placenta, fetal membranes, embryo, and hematopoetic structures its lack has been held responsible for degeneration of the placenta and membranes with resultant death of the embryo. The maternal organism seems not to suffer at all from a lack of this vitamin. It is found most abundantly in egg yolk, green vegetables, muscle meat, and whole wheat grains. One preparation of vitamin E made from wheat germ oil has been widely advocated for therapy.

Vitamin K, klotogen, seems to be of no value to the pregnant or puerperal patient but may prove to be helpful to the new born infant with icterus or hemorrhagic disease of the new born, due to a deficiency of prothrombin. It has been suggested that it be given to the mother who has repeatedly given birth to jaundiced babies.

One morning recently a number of doctors were holding forth in a staff room when the question of vitamins in pregnancy came up. One of the group, whose judgment is founded on a wealth of clinical experiences over many years was asked if he gave his patients vitamins during pregnancy. I think his reply is of great value. "Yes," he said after a pause, "I give all my patients vitamins and always have. I give them milk and meat and plenty of vegetables and fruit."

All writers on the subject agree that nothing in the form of concentrates equals or approaches in value natural foods as a source of vitamins. Only for some unusual or abnormal condition is it necessary or useful to add concentrated or synthetic vitamins to a patient's diet if she is able to eat and assimilate foods. All of the needs enumerated above are met by a diet rich in the protective foods: that is, by milk, green and yellow vegetables, fresh uncooked fruits, and a moderate consumption of meat. Deficiencies are due to a limitation of diet to refined cereals, including breads made from such refined grains, to sugar, and to defatted cereals.

Another class of dietary constituents is the minerals. Of chief interest to us are calcium, phosphorous, magnesium, iodine and iron.

If the pregnant patient is deprived of calcium in her food, this mineral is removed from her reserves even to the point where her bones may develop osteomalacia. And in case of marked deprivation the fetus may be born with rickets. Pregnancies frequently repeated along with deficient calcium intake and retention have a cumulative effect so that the later born babies show the deficiency increasingly. The proper metabolism of calcium and phosphorous hinges on more than the presence of ample amounts of these minerals in the diet. Many other factors are concerned. Even worry is said to have an influence. Vitamin D, calciferol, the calcium bearer, is very important in utilizing the calcium ingested and has an even greater influence on the phosphorus. Indirectly, through its role in forming vitamin D, sunshine is valuable. It is known that in sunny Southern climates a pregnant woman can be maintained in calcium and phophorus balance on a much smaller intake than can one farther north. With an abundance of milk in the diet the Ca and Ph intake will be ample, but these minerals may not be absorbed or retained unless the rest of the diet is adequate. The vitamins A, B, C and D and an excess of base-forming radicals, — all have a favorable influence in this. A great excess of either Ca or Ph over the other favors the loss of the one smaller in amount. The best ratio of Ca to Ph seems to be 1 : 1.5. Because of the abundance of Ph in proteins there is no lack of this mineral if the protein in the diet is sufficient. Calcium is found most abundantly in milk and milk products, and also quite plentifully in leafy vegetables. Sherman gives the figures for maintenance as a daily average of 0.45 grams of Ca and 0.88 grams of Ph. Since a quart of milk contains slightly over one gram of calcium and slightly less than one gram of Ph, this quantity of milk daily, together with the Ca and Ph from other sources gives a very generous margin of safety over the above figures. The expression, "For every child a tooth," should no longer be true with good dental supervision and a better recognition of the need for the proper retention of Ca and Ph.

Magnesium requirements are met automatically with Ca and Ph, for it is always associated with these. The normal daily need is 0.4 gram in late pregnancy.

In the case of IRON the fetus typically shows its parasitic nature. The baby born of an anemic mother has at birth a normal hemoglobin reading and normal red cell count. However, such a baby born of an anemic mother lacks the reserves of iron which normally are present to carry it through lactation, during which its ingestion of iron is insignificant, and until iron containing foods are added to its diet. Such babies soon become anemic. This danger of postpartum anemia in the new born is one excellent reason for preventing or correcting anemia in the mother. The new born infant normally has three times as much iron in proportion to body weight as the adult. The total iron in the adult is only 3.0 grams. 10 to 12 mg. of food iron ingested daily is sufficient though 15 mg. is standard and insures adequate retention by mother and fetus. The absorption of iron may be impaired when a gastric anacidity exists. 0.5 gm. daily of ferrous sulphate will correct a secondary anemia.

In the last trimester there is 25% increase in the volume of blood and 20% increase in the total number of red blood cells in the body. Because the blood volume is increased relatively more than the total red blood cells there appears to be an anemia. This hydremia or dilution disappears postpartum and the hemoglobin reading returns to normal. For this reason a reading of Hgb of 80% is not unusual in the last several months of pregnancy. Liver does no good in correcting the usual secondary anemia and is needed only in the treatment of the macrocytic or pernicious type. Let me repeat that it is desirable to watch for and correct an anemia in the last trimester as much for the baby's sake as for the mother's.

In the goiter belt it is necessary to insure an adequate iodine content in the diet. Along the coast the abundance of iodine in our milk, vegetables and fruits, and especially in our sea foods makes such precaution as using iodized salt needless.

We have to consider only one more factor in the diet, an indispensable one, WATER. Habits of water drinking vary tremendously. The kidneys can function well with a surprisingly low intake of water. With an abundance of milk, fruit, and green vegetables it is not necessary to insist on an increase above the patient's customary amount unless this is far below normal, and then perhaps only as an aid in correcting constipation or for some other reason not connected with the metabolism. The metabolism of water, the regulation of water balance, is beyond the scope of this paper, and when it becomes fully understood may give the long sought answer to the search for the cause of toxemia of pregnancy and eclampsia.

As to the ingestion of other drinks, tea and coffee may be taken as usual. About alcoholic drinks I think it fair to say, without entering into a controversy with anyone who may want to differ on a question which is often debated by the emotions rather than by the intellect, the usage should be as moderate, as temperate, as the ingestion of food. With a tendency to acidosis and to gastric hyperacidity it will probably be well for the patient to take less than usual. I think that ought to satisfy all schools of thought.

We ought to consider briefly the early postpartum period, especially lactation and the special demands which this makes on the mother. A diet in the last trimester sufficiently abundant in protein to insure nitrogen storage is advisable for successful lactation. During lactation abundant protein with vitamin B is requisite. The animal proteins, milk and meat, are most satisfactory. Carbohydrates do not increase the milk yield but do add slightly to the fat content of the milk. Fat in the diet increases only slightly the amount of milk but does increase the fat content. Four times the amount of Ca and Ph secreted in the milk must be ingested to maintain these minerals in balance in the body. This emphasizes the importance of the patient's having a reserve stored up in the last trimester in anticipation of this postpartum demand.

I should like to emphasize that the last trimester of pregnancy is especially important from a dietary standpoint. By proper supervision the mother may be protected, and, what is equally important, the fetus may be spared from congenital or neo-natal rickets, scurvy, hypoplasia of the teeth, tetany, and anemia. Prevention here is much easier than is cure.

In conclusion I can only repeat what I wrote at the start. All ancient and modern authorities agree that the diet of the pregnant woman should be plain, simple, easy of digestion, highly nutritious, and partaken of at regular intervals. In a word, as Lusk said, the diet in pregnancy should be "ample in quantity and adequate in quality." We do know better than did Lusk what those words mean.

ERYSIPELOID

REPORT OF CASE TREATED WITH X-RAY AND SULFANILAMIDE

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Swine erysipelas has been prevalent in Europe for a long time. It was first recognized as a definite entity and differentiated from anthrax in 1882 by Pasteur[1] and his co-worker, Thuellis, who first described and prepared a successful vaccine from organisms isolated from characteristic cutaneous lesions. The vaccine was prepared by serial passage of the organisms in rabbits, which these authors observed decreased its virulence for swine. While organisms so prepared are attenuated for swine, they still are virulent for man, and very severe in-

Presented at the meeting of the Providence Medical Association, December 2, 1940.

fections have been reported in veterinarians accidentally infected with such cultures. The disease in swine has been described in detail recently by Van Es and McGrath.[2] From their clinical and pathologic studies they have divided this disease roughly into an acute form and several chronic manifestations. Briefly, in the acute form of the disease the picture is that of acute sepsis, with fever, loss of appetite, patchy ecchymotic discolorations of the skin and painful swelling of the joints. Death may result from increasing respiratory distress with pulmonary edema in from one to four days, or the acute symptoms may completely subside. The mortality in this form ranges between 50 and 100 per cent.

The chronic forms of infection may be continuous with the acute attack or may insiduously manifest themselves after several weeks of apparent good health. Chronic proliferative arthritis frequently with osteitis, an urticarial cutaneous inflammation commonly called "diamond skin," and bacterial endocarditis are the most commonly recognized chronic manifestations. Post-mortem observations on animals dying of endocarditis reveal most frequently on the mitral valve, and to a less extent on the aortic valve, large, wartlike or cauliflower appearing reddish yellow vegetations. The vegetations in all instances show a marked tendency to attack and invade the mural endocardium.

The infection is commonly acquired through the gastrointestinal tract, but infection from skin abrasions is known to occur.

The causative organism, erysipelothrix rhusiopathiae (suis),[3] is a gram-positive, non-motile, non-spore forming, micro-aerophilic bacillus. There are three generally accepted strains; human, swine, and mouse. It has an unusual dissemination and is found wherever nitrogenous substances are decomposing. It has a tendency to form long branching filaments and is easily cultured in hormone broth and calf brain medium. In putrid material the organism is capable of retaining its viability and virulence for months. The organism is quite resistive. Boiling is immediately effective, but it will resist drying for a month or more, and in salted and pickled meats it will survive for three or four months. The virulence as well as the appearance of the organism can be modified by serial passage through animals and also by culture. Passage through rabbits increases the virulence for this species but decreases it for swine. Passage through pigeons increases the virulence for all animals. Pure cultures can be obtained from the heart blood of inoculated pigeons.

There is evidence at the present time that swine erysipelas is on the increase in the United States.[4] It was first reported in the United States in 1921, at which time there were only a few isolated cases. It steadily increased until 1930, when an outbreak was reported in South Dakota. Since that year the malady has appeared in practically all the states. There is no mention in the literature of its having occurred in the State of Rhode Island. Therefore, when a case of erysipeloid came to my attention, it seemed worthy of reporting.

Erysipeloid is the term first applied by Rosenbach[5] in 1884 to a self-limited skin infection characterized by a slowly progressive, painful erythema beginning at the site of infection and extending peripherally as the central area fades. He observed this infection on the hands of kitchen workers, butchers, and those who handle fish and game.

The disease is now known to be caused by erysipelothrix rhusiopathae, the organism of swine erysipelas, and is identical with the cutaneous infection generally known to the public as "fish-poisoning," acquired from handling either fresh or salt water fish.[6] Its recognition as a significant occupational disease of commercial fisherman, abattoir workers, by Klauder, 1938,[7] and bone cutters[8] has been reported.

Considering the infection in man, it is found, as a rule, that infections occur following abrasions or penetrating injuries of the hands. Infection through the gastrointestinal tract is exceedingly rare, but the case reported by Fissinger and Brouet[9] of infection following the ingestion of infected salt pork leaves little doubt as to the possibility of this route of infection.

Following an incubation period of from one to five days there develops at the site of injury a sharply defined, slightly elevated, zone of erythema with a characteristic purplish red coloration which slowly extends peripherally as the central area fades. The purple red and the slow progression of the infection differentiates it from true erysipelas. Extension above the wrists is rare. Lymphangitis and lymph node involvement with constitutional symptoms are seen only with the most virulent infections. Self limitation with spontaneous recovery in from one to four weeks is the rule. Suppuration is never observed. Attempts to recover the organism

from characteristic cutaneous lesions by the usual methods of culturing small amounts of serum from the wound or aspirated material are always unsuccessful. However, culture of a small section of skin taken from an area of erythema will usually grow the organisms.

The mildness or severity of infection usually suggests the source of infection; this in turn governs the virulence of the organism. Klauder found from clinical observation that the organisms from the following sources in the order stated were the most virulent: (1) partly decomposed fish, (2) live slimy fish, (3) swine, (4) fish in the retail market, and (5) other sources.

Particularly severe forms are seen in veterinarians accidentally infected with virulent cultures. Klauder, Righter and Harkins[6] observed a severe form of erysipeloid disease in commercial fisherman of the Atlantic seaboard which they concluded was comparable to the severe form of erysipeloid disease observed from swine infections. Milder forms have been observed from such sources as old cheese, infected game and commercial meat. Infection has been reported from such unusual sources as from injury to the hand on a stone in a dry creek and later carrying an opossum by the tail wrapped around the injured fingers, from skinning a rabbit and other contacts with rabbits by rabbit breeders, from handling recently thawed fish by an attendant in a zoological garden, from performing an autopsy on a dead animal in a zoological garden, from the sting of a jellyfish, from handling a dogfish which had apparently lain on the beach for a long time and dried thoroughly in the sun, from the prick of a spine of a dried stuffed fish which was mounted and used as an ornament, from infected sheep,[10] and from injury from a fish hook.[11]

Acute and chronic arthritis has been reported, the former as a concomitant complication and the latter as a late sequela of an original cutaneous infection.

The occupational history of handling lobsters is significant as the source of infection in the case of Russell and Lamb,[12] who reported a case of bacterial endocarditis caused by erysipelothrix rhusiopathae bacteriologically proved as a rare fatal complication of erysipeloid infection. Gilchrist[13] in 1903 reported 323 cases caused by crab bites or lesions produced by crabs. An epidemic of 200 cases in which the infection was acquired from cleaning fish has been reported from Odessa.[14]

Klauder states that "Infection can invariably be traced to contact with animals, fish, Crustadea, dead matter of plants and animal origin or matter derived from animals such as hides, pelts, bone, and manure." Klauder also reported six cases involving veterinary students "infected when dissecting a dead horse." Gross[15] gives a report of thirteen cases among veterinary students at Kansas State College, sustained dissecting a dead horse. Brown[16] reports an infection in himself following the scuffing of a knuckle while cleaning a buffalo skull. Ritchie[17] reports one case from handling fish caught in the Great Lakes, and Lawson[18] has reported 210 cases from cattle bones used in making buttons.

As originally described by Rosenbach, erysipeloid infection occurs, in the majority of instances, following slight traumatic injuries beginning as an attack of cellulitis with an erythematous patch, usually on a finger, spreading slowly and developing characteristically a well-defined, slightly elevated, bluish margin accompanied by intense swelling, itching, pain, and tenderness. Associated lymphangitis and lymphadentis are not uncommon. The disease may spread from one finger to another until all fingers or a considerable part of the hand is involved. The incubation period of the disease usually varies from one to four days.

The localized cutaneous form of the disease occurs at the site of an epidermal defect on any part of the skin, usually the hands; it is of variable severity, with or without localized arthritic or constitutional symptoms. The first symptom is pain at the site of inoculation and is followed by swelling and erythema. The most distinctive feature is a sharply defined, slightly elevated zone, which extends peripherally as the central portions fade away. The involved area is swollen and tense as though fluid had been injected intracutaneously. If the finger is involved the swelling and tenseness make movement difficult.

Another characteristic of the disease is its migratory nature; new purplish red patches appear at remote areas. If the infection originally involved one finger, eventually all fingers and the dorsum of the hand or palm or both may become affected, the erythema appearing and disappearing, or extension may take place by continuity. The disease may completely disappear at the areas first involved by the time other areas are affected. The disease involutes without desquamation.

The appearance is not that of a pyogenic infection, with which the condition is frequently confused. The color of the erythema is different, there is no pitting on pressure, and suppuration never occurs, although itching and tingling are frequently present. Pain is the most conspicuous subjective symptom. It is throbbing and burning in character, often preventing sleep.

Treatment of this condition for the most part is conservative but varied. Rest and heat appear to be used by the greatest majority of students of this disease, using either wet or dry heat. Wet dressings and the usual antiseptics are effective. Klauder favors constant wet dressings of twelve per cent ichthammol in alcohol. He recommends repeated erythema doses of ultra-violet with a water cooled mercury quartz lamp. Holman[19] also reports excellent results in the treatment with ultra-violet irradiation. There is available an anti-erysipeloid serum. Klauder states serum is only indicated if the infection persists one month, if its progress is rapid, or if arthritic symptoms are conspicuous. Ingram[20] recommends fractional doses of x-ray. Walker[21] reports one case treated successfully with x-ray.

Report of Case

Clinical History: T. S. a white man aged thirty-five, American, married, a butcher, entered my office October 19, 1940, complaining of severe burning pain and swelling of his left hand of two days duration. The pain was so severe that he spent two sleepless nights. Eight days before he sustained a laceration one-half inch long on the lateral aspect of his left index finger while he was cutting pork. In spite of immediate care the wound suppurated the following day. After treatment with hot epsom salt soaks, the original injury healed on the sixth day. Two days before he came to see me, six days after injury, the finger at the site of injury became swollen, red and extremely painful. This lesion extended from the healed one-half inch laceration at the lateral aspect of the index finger at the metacarpal phalangeal joint over the dorsum of his hand. The following day, nine days after injury, the lesion remained the same but his temperature went from 99.4 degrees on the previous day to 100.8 degrees. But on the tenth day from the time of his injury the lesion extended over his entire left hand, to the dorsum of his right hand, to his face and to his neck. The day he first came to see me he wore an old shirt which was highly starched, stiff and tight around his neck. This uncomfortable feeling around his neck caused him to pick at his collar incessantly during the day. He felt warm so he also rubbed his face with the back of his hand. His temperature was 102 degrees and his pulse was 94. He complained of chills, general malaise, headache, fever, and severe pain in his hands, neck and face. His fingers and hand felt stiff. After consultation with a surgeon and a dermatologist he was admitted to the Rhode Island Hospital on October 21, 1940, with the diagnosis of erysipeloid of hands, face and neck due to swine infection.

Physical Examination: The patient was well developed and well nourished, he was acutely distressed with pain in his hands made worse by movement. His face and neck to the collar line were covered with many mottled raised sharply defined purplish erythematous placques and confluent papules. His feet were cold and cyanotic. His left arm showed no streaking. There were no palpable axillary glands. The left hand showed a healed one-half laceration of the lateral aspect of the index finger at the metacarpo-phalangeal joint. The finger and dorsum of the hand were swollen and covered with a purplish erythematous lesion as described above. The right hand was covered with a similar lesion and had a bracelet formation at the wrist.

The blood pressure was 140 m.m. of mercury systolic and 84 m.m. diastolic, the pulse rate was 120, the temperature, 102 degrees, and the respiratory rate, 20 per minute. The heart, lungs, and abdomen were negative.

Laboratory Examination: Urine examination on October 22, 1940—yellow, acid, s.g. 1010, negative for sugar, one plus albumin, sediment negative. On October 28, 1940—yellow, acid, s.g. 1020, negative for sugar, one plus albumin, sediment negative. On admission the erythrocyte count was 4,800,000 and the hemoglobin content 104 per cent. The leucocyte count was 16,400 with differential count — polymorphonuclear neutrophils 92 per cent, small lymphocytes 8 per cent. The Wassermann and Hinton tests were negative. Blood chemistry was urea nitrogen 8 m.g. per 100 c.c. of blood; glucose 81 m.g. per 100 c.c. of blood. October 22, hemogoblin content was 104 per cent, blood free sulfanilamide was 8.0 m.g. per cent, level total was 10.8 m.g. per cent, the leucocyte count was 18,700 with neutrophils 90 per cent and small lymphocytes 10 per cent. On October 24, hemogoblin content was 110

per cent, blood free sulfanilamide 8.0 m.g. per cent, level total 11.1 m.g. per cent, leucocyte count 13,500 with neutrophils 88 per cent, small lymphocytes 12 per cent. On October 28, 1940 hemoglobin content was 100 per cent, blood free sulfanilamide 9.0 m.g. per cent, level total 11.8 m.g. per cent, leucocyte count 17,500 with neutrophils 88 per cent, small lymphocytes 10 per cent, monocytes 2 per cent. Serum aspirated from the lesion was sterile. Patient refused to have a piece of skin excised so the organism was not recovered from this case.

Course of Illess: Patient was given sulfanilamide 100 grains with 50 grains of soda bicarbonate on admission to the hospital, then 25 grains with 15 grains of soda bicarbonate four times in twenty-four hours daily, until October 28, his eighth hospital day, when the dose was diminished to 10 grains with 10 grains of soda bicarbonate three times daily. On his second hospital day he was given an x-ray treatment: face one inch 76 r units, hands three inch 114 r units. On his third hospital day he was given a second x-ray treatment: face one inch 76 r units, hands two inches 152 r units, using no filter on face and one aluminum filter on hands. The temperature fluctuated from 102 degrees to 99.8 degrees until the seventh hospital day, then it fluctuated between normal and 98.8 until the tenth hospital day when he was discharged. The swelling and pain subsided on the third day but the purplish discoloration remained on his hands and face until the twenty-eighth day of his illness. Temperature remained normal after his discharge from the hospital. Sulfanilamide was discontinued the day before he was discharged from the hospital. He made an uneventful recovery. There were no complications. Discharged October 30, 1940.

Summary and Conclusions: A case of erysipeloid reported because of its rarity in the State of Rhode Island. It was unfortunate that the organism erysipelothrix rhusiopathiae was not recovered from this case. The case here submitted is believed to be the first of its kind reported in this state. With the disease increasing in the United States it is concluded that in the future it will occur more frequently in Rhode Island.

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RHODE ISLAND STATE DEPARTMENT OF HEALTH

The Rhode Island State Department of Health Cooperates with the Armed Forces in this Area

In line with the well established State Department of Health policy of cooperating with and offering assistance to all proper agencies, both governmental and private or voluntary, the staffs of several of the Divisions are now engaged during a considerable part of their working day in cooperative effort with the Selective Service System and armed forces located within our State boundaries. The greatest burden has fallen upon the Divisions of Laboratories, Preventable Diseases, Sanitary Engineering, Vital Statistics and Maternal and Child Health.

Division of Laboratories

In general all of the tests and examinations that are performed by the State Laboratories are available to military and Selective Service authorities upon request. The State Selective Service headquarters, acting upon the suggestion of the Surgeon General of the U. S. Public Health Service, directed that a blood Wassermann or similar standard serological test be included as a routine part of all physical examinations performed on prospective draftees. The State Division of Laboratories was requested to perform these tests. Special forms were designed to facilitate the record keeping of this project. It is required that a second blood test be performed on any person found to have a positive or suspicious serological reaction. From November 9, 1940, the date on which the first Selective Service examinations were held up to and including January 17, 1941, the State Division of Laboratories performed serological tests for syphilis on 4,231 Selective Service blood specimens. Thirty-nine or 0.9 per cent of these were found to be positive. The Division of Laboratories was also requested by National Guard officials to perform blood tests for syphilis on all of the State's National Guardsmen prior to their induction into the regular army. Under this program 272 specimens have been examined up to January 17th and 2 were found to be positive. As the number of draftees under the Selective Service System will increase during each succeeding month, the burden upon the State Laboratories will increase proportionately. It has already been necessary to employ additional personnel, both technical and clerical, to handle the volume of work. The diagnostic chemistry section of the State Laboratories has been called upon to perform a large number of urine and blood chemistry examinations on Selective Service registrants by the examining physicians. It is not possible to give any definite figures on these examinations because specialized forms were not used in submitting the specimens

Division of Preventable Diseases

The Division of Preventable Diseases receives a copy of the laboratory report on the blood test of each draftee and National Guardsman. Individuals found to have a positive serology are followed-up by the investigative staff of the Division and referred for the required second test if this has not already been performed. If the second test has been done the Selective Service registrant is referred to his own physician or to a clinic, if he is indigent, for further observation and treatment, as indicated. When a history suggests the possibility of a new infection, efforts are made to trace contacts and to discover the source of infection. This is done as an integral part of our regular epidemiological program. The epidemiologists are also available to the medical officers of all military reservations in the State to assist them with their investigations. Following conferences between state and military health officials, arrangements have been completed for the reporting of all cases of venereal diseases that are discovered in army and navy men. Epidemiological investigations are also conducted when information concerning the possible source of infection is available.

At the request of army officials the portable X-ray machine owned by the State Department of Health has been made available for us in the induction examinations of Selective Service draftees. It is expected that untimately the Army Medical Department will be able to secure a sufficient number of the miniature X-ray machines for itself, but until such time as delivery on these is forthcoming, the State Health Department will take the required chest X-rays. Besides the use of the machine, the Health Department supplies a physician and two X-ray technicians who are present at the Army Reception and Induction Center. The films are read by the Health Department physician and a report rendered to the army induction physicians. During the first and second drafts approximately

1000 men will be X-rayed by the state in this fashion. In addition to this, the National Guard officials have requested the State Department of Health for chest X-ray examinations on all of Rhode Island National Guardsmen prior to their induction in the regular army. This work has been proceeding apace. In spite of the addition of a second technician a tremendous amount of over-time work has been required from the staff members engaged in this X-ray work, in order to keep up with the time requirements of the military agencies.

Since October 1940 frequent conferences have been held with the medical officers in charge of the several naval and military establishments located within our state borders. Dr. Hilary J. Connor, the newly appointed Venereal Disease Control Consultant, is attempting through these conferences to anticipate problems of a venereal disease nature before they actually occur. It is felt by all parties concerned that many of the bad situations that arose in the vicinity of military reservations during the past war can be averted or at least lessened by this anticipatory action. A well rounded joint program with contributions by the State Department of Health and the navy and army medical men is now nearing completion. This program is patterned after suggestions contained in the "Agreement by the War and Navy Departments, the Federal Security Agency, and State Health Departments on Measures for the Control of the Venereal Diseases in Areas Where Armed Forces or National Defense Employees are Concentrated."

Division of Sanitary Engineering

The Division of Sanitary Engineering has undertaken a variety of work in cooperation with the armed forces and all problems of national defense, most of which has dealt with environmental sanitation in areas adjacent to the military establishments, rather than within the military establishments themselves. A detailed survey was made, in cooperation with the U. S. Public Health Service, to determine the scope and magnitude of the sanitation problems that might be expected due to increased concentrations of population both military and civilian incident to the military. The supervision of public water supplies serving the military areas as regularly exercised by the division has been expanded by increasing the number of inspections made of purification works and by collecting samples for laboratory examinations with greater frequency. Increased sampling of the water supply has been made necessary in some areas to ascertain that contamination has not been introduced during the installation of new water piping and appurtenances. Emergency chlorination was adopted on recommendations of the division in some cases where it was discovered that new water piping had apparently been put into use without proper disinfection. Much laboratory assistance has been given in the development of a new source of water supply to serve the Quonset Naval Aid Base. Special inspections of public water supply systems have been made to ascertain possible weak points against sabotage. A meeting has been held with the superintendents of all the larger public water supplies and many of the more important industrial supplies to exchange experiences and recommend methods for making sabotage more difficult, among which are provisions for increased patrolling, unannounced visits by the police, flood lighting, fencing, and exchange of equipment and fittings among the different supplies for quicker repairs if necessary. Sewerage developments have been followed to obtain satisfactory disposal of sewage following a request by the naval authorities. A type of sewage treatment plant was recommended for the Quonset Naval Air Station and adjacent housing projects which would protect bathing and fisheries interests near the point of discharge of the treated sewage. Preliminary plans prepared in accordance with these recommendations were submitted for approval. Certain modifications to strengthen the protective treatment were subsequently incorporated into the final plans. Consultations have been held on alternate methods of sewage treatment for a housing project in the Newport zone and for barracks at Fort Kearney.

The milk supply situation has been reviewed. An increased control of local milk producers near the zones has been instituted. Increased inspectional services for food dispensing establishments have also been provided. All types of camps, resorts, roadside stands, bathing places, etc. which will receive increased patronage from the troops are to be subjected to intensified scrutiny.

Industries which receive national defense contracts are inspected for occupational disease hazards from such sources as dust, fumes, vapors, volatile solvents, etc. Lists of contracts are received from Washington and special attention is given to places that are suddenly called upon to undertake processes new to them. Vigilance is ex-

ercised to guard against problems that might result from overcrowding or a rapid increase of inexperienced workmen exposed to potential industrial hazards. Inspectional judgment of potential hazards is corroborated by laboratory studies.

Division of Vital Statistics

A seldom thought of service that is now being performed by the Division of Vital Statistics daily has a most important bearing on the National Defense Preparedness Program. The Federal Government now requires a birth certificate from each employee who is working in any manufacturing plant receiving National Defense contracts. Although at first glance this would appear to be a rather simple procedure, it actually entails a large amount of effort on the part of the personnel in this Division. Since June 1940 the office has cleared an average of approximately 85 birth certificates and verifications each day. Because of the inadequacy of the birth index for years prior to 1900 it is often extremely time-consuming to check on an individual's birth. Within the past several years the index was completed as far back as 1900, and if it were not for this even greater trouble would be caused by this mass request for birth certificates.

Division of Maternal and Child Health

Certain sections of the State have already begun to realize a considerable population increase due to the development of military reservations and the expansion of a large variety of industries in Rhode Island that are engaged in defense production. For every person added to the military personnel in army and navy reservations it is estimated that the civilian population in the area adjacent to the reservation is increased by one person. Emergency accommodations have increased not only problems in housing and environmental sanitation, but also in infant and child hygiene and welfare. Nutritional problems likewise enter the picture both in adults and children. While at the present time none of these problems have reached an acute stage in this State, the staff of the Division of Maternal and Child Health is watching the situation as it develops and is studying the experiences of and methods developed for dealing with similar problems in other states. By anticipating conditions before they actually exist much can be done to facilitate the adjustment of our communities to the rapid population increase. School and recreational facilities with their attendant sanitary problems are being considered in a like manner.

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INCREASE IN CASES OF CANCER

Whether cancer is or is not increasing is still a matter for debate. That we, as medical men, see and treat more cases of cancer than we did ten years ago is evidenced by figures from the records of the Rhode Island Hospital. In 1929 there were 7,814 discharges from the Hospital, 417 with a diagnosis of cancer of some sort. In 1939, of 7,911 discharges, 576 left with a diagnosis of "cancer." That shows an increase of 38% in those ten years in the number of cases treated. Of course these figures do not mean that there has been an actual 38% increase in cancer in Rhode Island in these ten years. But it does mean that 38% more cases are arousing public interest from being treated in a public hospital.

An increasing public interest in any disease brings a challenge to the individual medical man. He will be consulted more and more frequently by worried men and women who have read newspaper articles or pamphlets or have heard lectures giving repeated warnings about sores that do not heal, lumps in the breast, or abnormal bleeding from body cavities. He will soon find that these people will not be satisfied with anything but a thorough examination and a straightforward, intelligent opinion of his or her condition.

It isn't possible for any man to become proficient in all branches of medicine. Neither can the general practitioner be expected to distinguish for instance between types of glandular tumors, but he can learn to avoid the gross mistakes in diagnosis that too often lead to disastrous delay and make the treatment of malignant disease so hopeless. It is perfectly true and much to their credit that members of the medical profession spend a great deal of effort in keeping abreast of the advance in medicine.

DR. CHARLES V. CHAPIN

Written words can only feebly express the accomplishments of Dr. Chapin. His life has been a stimulation not only to public health officials but also to the medical profession in general. He was a cultured and understanding man and was possessed of a keen and analytical mind. Every problem of public health administration received very careful study before he formulated his ideas. He was untiring in collecting exact information concerning public health matters and he justified his views about statistics which were unquestionable. He suggested certain radical departures from previous public health practices which, after years of observation, convinced other health authorities that he was right.

No other single man in the history of public health in the United States has ever had such a wide-spread influence on the modernization of health department procedures. In his contribution to a volume, "A Half Century of Public Health," commemorating the 50th anniversary of the founding of the American Hospital Association, he used these words, "Figures do not measure the terror of epidemics nor the tears of the mother at her baby's grave, nor the sorrow of the widow whose helpmate has been snatched away in the prime of life. To have prevented these not once but a million times justifies our half century of public health work." These words clearly indicate the deep interest which sustained him during his active years as public health officer. He was not afraid to express his ideas whether they were likely to be accepted or not and yet personally he was a most charming man.

He was not only the author of books but he was also a voluminous writer of articles on different phases of public health. Every such contribution was given the most careful study before he did his writing.

His acquaintance with health officers was extensive not only in this country but also in foreign countries. He was in the class with Dr. William C. Gorgas whose health work made possible the completion of the work on the Panama Canal. Even during his student days in medical school he was greatly impressed with the discussions by Dr. Janeway who at the time was keenly interested in Louis Pasteur's experiment in connection with the microbe theory of disease. He was also a close friend of Sir Arthur Newsome, chief health officer of England.

Dr. Chapin was a teacher at Brown University, at Harvard Medical School and Harvard School for Health Officers. His office in the City Hall was a Mecca for visitors interested in public health and they came from all parts of this continent and Europe. He received a great many honors for distinguished service in his chosen field, all of which he accepted in his modest way.

Local physicians have for years recognized his ability and accomplishments, and Dr. Chapin's opinion was about the last word in the solution of many of the local problems. He was a great inspiration to those who came in contact with him and the course of many of their lives was influenced by his stirring character and profound wisdom. His contribution to the saving of lives and prevention of disease cannot be measured nor can the heritage of his life and accomplishments. The recognition which he received before his retirement from active life pleased him greatly and partly repaid for the long years of studious endeavor to improve public health.

NEW ENGLAND HEALTH INSTITUTE

"Public Health in National Defense" is the theme of the eleventh New England Health Institute which will be held at the Hotel Statler, Boston, April 2, 3, and 4. The health departments of every New England State will collaborate in presenting the Institute. Other collaborating agencies are the United States Public Health Service, Children's Bureau United States Department of Labor, New England Tuberculosis Association, Massachusetts Public Health Association and the Massachusetts Central Health Council.

Speakers of national prominence will be in charge of many of the sessions. Dr. Thomas Parran, Surgeon General of the United States, is to speak at the general meeting on Wednesday evening. The three-day Institute is divided into sixteen sections, covering every field of health work. Four sessions will run concurrently every hour from 9:30 a.m. to 12:30 p.m., and from 2 p.m. to 5 p.m.

In the Section on Communicable Diseases, Dr. Lester A. Round, Director of the Rhode Island Department of Public Health, is Chairman of the Joint Session with Laboratory Section. In the Section on Maternal and Child Hygiene, Dr. Francis V. Corrigan, Chief of the Division of Maternal and Child Health, Rhode Island Department of Public Health, is Chairman of the Joint Session with Communicable Diseases Section.

RHODE ISLAND MEDICAL SOCIETY

House of Delegates

October 17, 1940

The regular meeting of the House of Delegates of the Rhode Island Medical Society to have been held September 19, 1940 was postponed because of the lack of a quorum to October 17, 1940. The meeting was called to order at 4:45 P. M. by the President, Dr. Lucius C. Kingman. The following members were present: Drs. Kingman, Mowry, DeWolf, Hammond, Miller, Bradley, Buffum, Burgess, Franklin, Hamilton, W. S. Jones, Kent, Messinger, M. Potter, Ronchese, M. Saklad and Wells.

The Secretary read a report of the meeting of the Council of September 19, 1940, and then read the report of the regular meeting of the House of Delegates of May 16, 1940. It was voted to accept the Secretary's reports and place them on file.

The Delegate of the Society to the American Medical Association then read a report of the National Convention held in New York, June 11-14, 1940. It was voted to accept this report and place it on file. Dr. Halsey DeWolf then outlined the plan for medical preparedness and reported for the Committee on Medical Defense. Dr. Wells moved the dues of the Rhode Island Medical Society be fixed at $10.00 for the ensuing year. Motion seconded and passed. Dr. Alex Burgess moved the Rhode Island Medical Society participate in the New England Postgraduate Assembly. After seconding, the motion was passed.

The President, Dr. Lucius Kingman, then opened a discussion concerning the invitation to hold the annual meeting of the Rhode Island Medical Society in Newport, R. I. in 1941. Dr. Merle Potter, having been present at the previous meeting of the House of Delegates, moved the question be reconsidered and the invitation from the Newport County Medical Society be accepted. After considerable discussion as to the available lecture halls, etc., the motion was seconded and passed.

Dr. Jesse Mowry moved the annual meeting be held May 28-29, 1941 in order to avoid a conflict with the annual convention of the American Medical Association. Motion was seconded and carried.

The President then outlined a plan whereby committees might be combined in an endeavor to make for better coordination and to reduce the number of committees. He asked for authorization to carry this into effect in January 1941. It was moved, seconded and passed. It was moved, seconded and passed to authorize the President to appoint a committee to change the By-Laws regarding the date of the annual meeting of the Society.

Dr. William P. Buffum then moved that inasmuch as "The National Hearing Week will be observed throughout the country October 20 to October 26, 1940, the Rhode Island Medical Society takes this occasion to call attention to and endorse the work of the Providence League for the Hard of Hearing." It was seconded and passed.

Dr. Albert Miller moved the recommendation of the Council that the Rhode Island Medical Society pay $0.50 per member to the Rhode Island Medical Journal during the year of 1940-1941 be approved. Motion was seconded and passed.

It was moved, seconded and passed that the President appoint a delegate to the Congress of Industrial Health to be held in Chicago in January 1941 and that the House of Delegates recommend to the Council an appropriation of $100.00 to defray the Delegate's expenses. There being no further business, the meeting adjourned, with Dr. Kingman in the Chair.

Respectfully submitted,
GUY W. WELLS, M.D.,
Secretary.

Council

January 16, 1941

The regular meeting of the Council was called to order at 3:45 P. M., Thursday, January 16, 1941, by the President, Dr. Lucius Kingman.

Those present were Drs. Kingman, Mowry, Partridge, Miller, Burgess, MacLeod, Brackett, Fulton, Hammond and Wells.

The minutes of the meeting of September 19, 1940 were read and approved.

Dr. Mowry submitted the Treasurer's report of the Budget for 1941, pointing out the increase in the assistant librarian's expenses was due to the exhaustion of a special fund for that purpose. The report was accepted and approved.

It was moved to recommend to the House of Delegates that appropriations be made for all items mentioned in the Budget report. Motion was seconded and passed.

Dr. Mowry then moved that dues of all members of the Rhode Island Medical Society called to the

Service of the Flag be remitted for the time of Service. Motion was seconded and passed.

After a brief discussion by Dr. Kingman, Dr. Mowry moved that: "If and when the amendments to the By-Laws to establish the offices of Assistant Secretary and Assistant Treasurer are enacted, the President is authorized and directed, after consultation with the Nominating Committee, to appoint a Fellow of the Society to each of these positions until duly elected officers assume office at the close of the next Annual Session of the Society." The motion was seconded and passed.

It was moved to place the names of the following men on the retired list: Dr. Arthur Hollingworth of North Scituate, Dr. Thomas H. Murphy of Pawtucket, Dr. Albert H. Miller of Providence, and Dr. John J. Conway of Warren, Motion was seconded and passed.

It was moved that Dr. Amy H. E. Russell of East Providence be reinstated to membership as of January 1941. Motion seconded and passed.

Dr. Mowry moved the following members be dropped from membership because of non-payment of dues after having had the usual sixty day notices: Dr. Walter J. Dufresne of Pawtucket, Dr. William A. King of Woonsocket, and Dr. Mark Rittner of Providence. Motion was seconded and passed.

There being no further business, the meeting adjourned at 4:25 P. M., Dr. Kingman in the Chair.

Respectfully submitted,

GUY W. WELLS, M.D., *Secretary*

House of Delegates

January 16, 1941

The House of Delegates was called to order by the President, Dr. Lucius Kingman, at 4:40 P. M.

Drs. Kingman, Mowry, Brackett, Partridge, Hammond, Miller, Honan, Burgess, Whitmarsh, Webber, W. S. Jones, MacLeod, Ronchese, Bird, Fulton, Messinger, DiLeone, and Wells were present.

The Secretary read the report of the Council of the same day.

The Secretary then read the minutes of the meeting of the House of Delegates of October 17, 1940. The minutes were approved.

The Secretary then read a report from the Resolutions Committee, as follows:—

"It was unanimously voted by the Resolutions Committee of the Rhode Island Medical Society that the By-Laws of the Society pertaining to the time of meetings of the House of Delegates, Council, and Society itself be made more flexible. It was agreed that the President, with the approval of the Council of the Society, should be able to change the meeting dates if he thought it for the best interest of the Society. This resolution was adopted because of the fact that meetings of the American Medical Association and the Rhode Island Medical Society this year conflict with each other."

It was moved, seconded and passed that:—The By-Laws be amended by changing Article V, Section 1; Article VII, Section 2; Article VIII, Section 2, by omitting fixed dates of meetings and that the President be empowered to call meetings at such times as seems most proper.

Dr. Mowry moved the present appointed committees be abolished, and, secondly, that the President be instructed to appoint the following eight committees: —

1. Nominations
2. Annual Meeting
3. Resolutions
4. Publicity
5. State Policies of Public Health
6. Public Health
7. Social Welfare
8. Medical Defense and Grievance

Dr. Mowry's motion was seconded by Doctor Whitmarsh. It was discussed by Drs. Kingman and Brackett. Motion passed.

The President then read the names of the Committees as follows:—

COMMITTEES ON

1. *Nominations*
   - J. F. Kenney, Pawtucket, Chairman
   - P. Batchelder, Providence
   - P. C. Cook, Providence
   - N. S. Garrison, Woonsocket
   - J. E. Ruisi, Westerly
2. *Annual Meeting — For 6 months*
   - W. S. Jones, Providence, Chairman
   - C. Bradley, Providence, Commercial Exhibits
   - E. F. Burke, Pawtucket
   - R. L. DiLeone, Providence
   - N. M. MacLeod, Newport, Annual Clinics, Treasurer, ex-officio

   Members of Standing Committee on Arrangements with added member for Commercial Exhibits and member for Clinics. The latter to appoint own sub-committees.

3. *Resolutions — For 6 months*
W. H. Foley, Providence, Chairman
F. H. Chafee, Providence
E. F. Kelly, Pawtucket
Resolutions Committee shall be same as Standing Committee on Legislation.

4. *Publicity — For 6 months*
J. P. Eddy, Providence, Chairman
C. L. Farrell, Pawtucket
J. Langdon, Providence
Shall be same membership as Standing Committee on Education.

5. *State Policies of Public Health*
F. V. Hussey, Providence, Chairman
A. M. Burgess, Providence
H. DeWolf, Providence
J. E. Donley, Providence
A. G. Fidanza, Providence
R. Hammond, Providence
H. E. Harris, Providence
C. H. Holt, Pawtucket
J. P. Jones, Wakefield
H. P. B. Jordan, Providence
L. C. Kingman, Providence
H. A. Lawson, Providence
H. C. Messinger, Providence
W. C. Rocheleau, Woonsocket
A. H. Ruggles, Providence
M. Saklad, Providence
W. S. Streker, Providence
M. H. Sullivan, Newport
D. V. Troppoli, Providence
J. G. Walsh, Providence
G. W. Wells, Providence
J. L. Wheaton, Pawtucket

6. *Public Health Committee*
C. F. Gormly, Providence, Chairman and Chairman Industrial Health
H. C. Pitts, Providence, Cancer
S. Sprague, Pawtucket, Public Health Clinics
H. E. Utter, Providence, Child Health
J. G. Walsh, Providence, Maternal Mortality
Sub-chairmen to appoint own committees.

7. *Social Welfare*
W. P. Buffum, Providence, Chairman
A. M. Burgess, Providence
H. P. Gongaware, Westerly
H. E. Gauthier, Woonsocket
N. M. MacLeod, Newport
A. V. Migliaccio, Providence
W. S. Streker, Providence
J. L. Turner, Pawtucket
G. L. Young, East Greenwich

8. *Medical Defense and Grievance*
W. A. Mahoney, Providence, Chairman
S. Adelson, Newport
N. S. Garrison, Woonsocket
J. E. Ruisi, Westerly
F. G. Taggart, East Greenwich
J. L. Wheaton, Pawtucket
R. H. Whitmarsh, Providence

Anniversary Chairman —
Samuel Adelson, Newport

Dr. Kingman then spoke of a scientific meeting of the Society to be held sometime in February. He felt that topics relating to the effect of war on medicine would be the most timely. It was moved, seconded and passed that such a meeting be held.

The President again discussed changes in the By-Laws made necessary because of war. These related to appointments of an Assistant Secretary and an Assistant Treasurer.

Dr. Burgess moved that By-Laws be amended by the following additions:—

Article IX, Section 1. "An Assistant Secretary and an Assistant Treasurer."

Article X, Section 5. "The Assistant Secretary and Assistant Treasurer shall perform such duties as may be delegated to them by the Secretary and Treasurer respectively and they shall familiarize themselves with the work of these officers."

Article VII, Section 6. "Or Assistant Secretary or Assistant Treasurer."

Dr. Burgess' motion was seconded and passed.

It was then moved to place before the next general assembly of the members of the Rhode Island Medical Society the changes in the By-Laws as recommended by the House of Delegates. Motion seconded and approved.

The President then read the names of the delegates and assistant delegates to the New England Medical Societies. They are as follows:—

Maine — A. H. Miller, Providence; C. D. Sawyer, Providence

New Hampshire — A. H. Ruggles, Providence; F. H. Mathews, Providence

Vermont — M. G. Platt, Riverside; F. J. King, Woonsocket

Massachusetts—J. C. O'Connell, Providence; C. A. McDonald, Providence

Connecticut — H. D. Kenyon, Westerly; M. W. Thewlis, Wakefield

Dr. Edgar S. Potter of Chepachet was appointed to the Board of Trustees of the Rhode Island Medical Building.

There being no further business, the meeting adjourned at 5:30 P. M., Dr. Kingman in the Chair.

Respectfully submitted,

GUY W. WELLS, M.D., *Secretary*

Since the meeting of the House of Delegates there have been the following changes in the Committees:

W. S. Streker, M.D. has resigned from the Committee on State Policies of Public Health and the Committee on Social Welfare and no one has been appointed to take his place.

F. V. Hussey, M.D. has resigned as Chairman of the Committee on State Policies of Public Health and E. S. Brackett, M.D. has been appointed in his place.

PROVIDENCE MEDICAL ASSOCIATION

January Meeting

The 94th Annual Meeting of the Providence Medical Association was held at the Medical Library on Monday, January 6, 1941. The meeting was called to order by the President at 8:35 P. M. The minutes of the preceding meeting were read by the secretary and approved.

The annual report of the Secretary was read by Dr. Herman A. Lawson and was approved and placed on file. In the absence of the Treasurer, Dr. William P. Davis, the annual report of the treasurer was presented by Dr. Herman A. Lawson. The annual report of the Executive Committee was presented by Dr. Lawson and was accepted as read.

Following the annual Presidential address by Dr. Walsh in which he reviewed the work of the Association during the past year, a motion was called for to provide for the election of the president of the Association for the ensuing year. Dr. Alex M. Burgess moved that the Secretary be empowered to cast the vote of the Association to unanimously elect Dr. Murray S. Danforth as President for the year 1941. The motion was seconded by Dr. Charles F. Gormly and was unanimously approved. Dr. Walsh appointed Dr. Herman C. Pitts and Dr. Peter P. Chase as a Committee to escort the new President to the platform. President Danforth extended his thanks to the membership for electing him to the Office and expressed the hope that he might continue the splendid leadership of his predecessors.

Dr. Danforth called for a motion on the election of a vice president for 1941. Dr. Jesse Mowry moved that the slate of officers as recommended by the Executive Committee to the Association, be elected for the ensuing year.

The motion was seconded and unanimously approved and the following were declared elected: President, Murray S. Danforth, M.D.; Vice President, Henry E. Utter, M.D.; Secretary, Frank B. Cutts, M.D.; Treasurer, William P. Davis, M.D.; Executive Committee—Two new members for five-year term each: John G. Walsh, M.D., Patrick I. O'Rourke, M.D. One member—to fill unexpired term of Frank Cutts, M.D., three years, William M. Muncy, M.D. Trustee R. I. Medical Library, one year term, William P. Buffum, M.D. Councillor to R. I. Medical Society, two year term, Alex M. Burgess, M.D.

Delegates to House of Delegates of Rhode Island Medical Society: Drs. Daniel V. Troppoli, Maurice Adelman, Francesco Ronchese, George F. White, Meyer Saklad, John A. Hayward, Harry C. Messinger, Ernest W. Bishop, Charles L. Southey, Henry F. McCusker, William P. Buffum, James Hamilton, John G. Walsh, Merle M. Potter, James H. Fagan, Kalei K. Gregory, Walter S. Jones, David Freedman, Raymond F. Hacking, Murray S. Danforth, Frank B. Cutts, Ralph DiLeone, Joseph B. Webber, Frank J. Honan, Clarence E. Bird, Robert H. Whitmarsh.

The President announced the following changes in the list of committee appointments for 1941, and stated that the complete list of all committees would be published in the next edition of *Medical News.*

Blood Transfusion Bureau: Dr. John G. Walsh appointed as an active member of this Bureau.

Committee on Credit and Collection: Dr. Emanuel W. Benjamin to replace Dr. G. Raymond Fox.

Committee on Entertainment: Dr. Russell R. Hunt, Chairman, Drs. Richard F. McCoart, Frank J. Honan, Carl D. Sawyer, Edward I. Seltzer.

Committee on Group Health and Accident Insurance for Physicians: This Committee, which consisted of Drs. Robert G. Murphy, Emanuel W. Benjamin, and James H. Cox, having completed splendid work over a period of a year and a half, is discharged with the commendation of the Association for the completeness of its reports and the success of its work.

Committee on Group Hospitalization: Dr. Henry S. Joyce, Chairman, Drs. Bertram H. Buxton, Vincent J. Ryan, Jacob Greenstein, Robert H. Whitmarsh.

Advisory Committee to the Bureau for the Handicapped: Dr. Herbert E. Harris to replace Dr. Murray S. Danforth.

Committee on Legislation: Dr. William H. Foley, Chairman, Drs. J. Merrill Gibson, William A. Mahoney, Francis H. Chafee, Herman C. Pitts.

Medical Milk Commission: Dr. Reuben C. Bates reappointed for a term of five years, and Dr. Frank I. Matteo appointed to succeed Dr. George W. Waterman.

Committee on Membership: Dr. Walter S. Jones replaces Dr. Vincent J. Ryan, and to the committee are added Dr. Arcadie Giura and John H. O'Brien.

Committee on Pre-School Examination: Dr. Robert M. Lord appointed chairman to succeed Dr. John Langdon.

Committee on Public Information: Dr. Russell S. Bray, Chairman, Drs. Herman A. Lawson, Frank B. Cutts.

Committee on Public Relations: Dr. John E. Donley, Chairman, Drs. Edward A. McLaughlin, Arthur H. Vaughn, Edward S. Cameron, Henry J. McCusker, Eske H. Windsberg, Charles L. Southey, Ulysse Forget, Samuel D. Clark.

Reading Room Committee: Dr. Herbert G. Partridge, Chairman, Drs. Amy E. Russell, Robert C. Robinson.

Committee on Telephone: Dr. Walter S. Jones appointed chairman to succeed Dr. William A. Mahoney, Drs. James H. Fagan and Robert G. Murphy complete the committee.

Committee on Tuberculosis and Silicosis: Dr. William P. Buffum appointed chairman and Dr. John I. Pinckney an added member to the Committee.

Committee on Welfare: Dr. Daniel V. Troppoli appointed to succeed Dr. Anthony V. Migliaccio.

A New Committee on Contract Practice is appointed as follows: Dr. Albert A. Barrows, Chairman, Drs. Joseph L. Belliotti, Walter J. Molony, Robert H. Whitmarsh, Richard S. Arlen.

The President announced that the annual report of committees would be printed and distributed to the membership within the month and therefore would not be read at this meeting.

The secretary announced that the Executive Committee had approved for election to active membership the following:

Walter F. Fitzpatrick, M.D.
J. Frank Ryan, M.D.
Werner Segall, M.D.

Dr. Jesse Mowry moved that the Secretary be instructed to cast one vote to elect these men to membership in the Association. The motion was seconded and approved.

Dr. Alex M. Burgess moved that the annual dues of this Association for the year 1941 be established as $15 per member for active membership and $5 per member for associate membership. The motion was seconded and passed.

Dr. Frank B. Cutts speaking for Dr. William S. Streker, Chairman of the Committee on the budget for the executive office, moved that an appropriation of $4858 be allowed for the maintenance and operation of the executive office. The motion was seconded and unanimously passed.

Dr. Harry C. Messinger moved that the Providence Medical Association appropriate the sum of $450 as a donation to the Rhode Island Medical Society for the use of the Library Building. The motion was seconded and unanimously passed.

On the motion of Dr. Herman C. Pitts the Association appropriated the sum of $500 to be used for the purchase of medical journals and for the binding of old journals for the files of the Medical Library.

Dr. Danforth extended the commendation of the Association to Herman A. Lawson for his devoted service as Secretary for the past five years.

The guest speakers of the evening were Dr. Seebert J. Goldowsky of this Association and Dr. John B. Sears, Chief, Peripheral Vascular Clinic, Beth Israel Hospital, Boston, who discussed the topic "Varicose Veins and Related Conditions." Dr. Goldowsky presented "Modern Treatment of Varicose Veins." Dr. Sears discussed "Phlebitis, Ulcers, the Thromboses." The papers were discussed by Dr. Frank B. Littlefield, Alex M. Burgess, and Jesse P. Eddy.

The President introduced Dr. Henry E. Utter who explained briefly the motion picture titled "Bobby Goes to School" which has been prepared by the American Academy of Pediatrics. This motion picture was then shown to the membership.

The meeting was adjourned at 10:55 P. M.
Attendance: 148
Collation was served

Respectfully submitted,
Frank B. Cutts, M.D.
Secretary.

The 47th Anniversary of the Tufts College Medical School Alumni Association will be celebrated at its Annual Dinner on Wednesday evening, March 26th, at 7:00 o'clock at the Hotel Somerset, Boston.

PRELIMINARY REPORT OF HEALTH DEPARTMENT ACTIVITIES PROVIDENCE, RHODE ISLAND 1940

I herewith present the preliminary report of the Health Department activities for the year 1940.

The Federal Census taken April 1940 showed 253,214 population as of April 1st. This is an increase over 10,000 from the State Census taken as of January 1, 1936. We are, therefore, recalculating the rates for the intervening years in accordance with this growth in population. The increase in births and marriages both actual and relative tend to indicate that Providence has again become an active growing city. Reports from the Inspector of Buildings showing an increase in dwelling units tend to confirm this fact. Accordingly, this department has estimated the population for 1940 as 254,000 and for 1941 as 257,000 using the projected population as of July 1 of each respective year.

While there was a slight increase in the total number of deaths over the previous year, owing to the increase in population the death rate is lower. The total number of deaths among the age group from one to sixty-nine inclusive, however, shows a steady decrease. The infant mortality figures also show a general decrease in infant deaths. For the first time in the history of the city, heart disease was the cause of death in over a thousand persons. Indeed, nearly one out of every three deaths was due to heart disease. Four hundred fifty-eight (458) of these deaths occurred in individuals over seventy years of age.

Both of the diphtheria deaths were non-residents, as were eight of the pulmonary tuberculosis deaths. The number of Providence residents dying from tuberculosis outside of the city has not as yet been ascertained. The decrease in the pneumonia deaths is gratifying. It is doubtless due to the newer methods of treatment. During the year a death from pellagra was reported to this department. One Providence resident died of an infection sustained following a dogbite, while one non-resident died of rabies and two non-residents died of mycotic infections. One death from amoebic dysentery, that of a resident, was the first in ten years of this disease. The epidemic of whooping cough has subsided and although one death occurred during the year another youngster died in January of 1941, having contracted the disease in 1940. The epidemic of measles that began in 1939 finally petered out in the Spring of this past year. While only two of the patients died, one in 1939 and one in 1940, it is our hope that eventually we will again be able to experience years without any measles deaths. It is interesting to note that one case of tularemia was reported to this department during 1940. This is the first Providence case on record.

The work of the new tuberculosis division is proceeding satisfactorily, and it is our hope that we will soon have funds sufficient to engage the services of a full time medical director for this unit. Beginning January 1, 1941, we have taken over from the Tuberculosis League a second quarter of the city for supervision and control.

It is our sincere hope that the department will be able to continue its high standard of work in the future.

Vital Statistics	*1940*	*1939*	*1938*
Deaths all	3143	3114	3280
Deaths under 1	215	219	222
Deaths over 70	1100	1026	1095
Births	5800	5601	5551
Marriages	2328	2004	1818
Infant Mortality	37.07	39.10	39.99
Death Rate	12.37	12.43	13.28
Birth Rate	22.83	22.36	22.04
Principal Causes			
1. Heart Disease	1044	920	833
2. Cancer	464	462	484
3. Pneumonia	148	180	266
4. Nephritis (chronic)	248	242	271
5. Cerebral Hemorrhage	188	184	214
6. Auto Accidents	32	35	30

	Cases (Residents Only) 1940	**Deaths** 1940
Communicable Diseases		
Diphtheria	11	2
Scarlet Fever	238	2
Measles	3105	1
Whooping Cough	251	1
Pulmonary Tuberculosis	35**	57
Septic Sore Throat	173	0
Gastro Enteritis } Bacillary Dysentery }	27	15
Amoebic Dysentery	1	1
Poliomyelitis	10	2
Epidemic Meningitis	6	3
Typhoid Fever	8	3
Paratyphoid Fever	1	1
Epidemic Encephalitis	0	0
Opthalmia Neonatorum	1	
Undulant Fever	0	0

Includes Non-Residents
North East Section of City Only

MICHAEL J. NESTOR, M.D.,
Superintendent of Health

REPORT OF THE MILK COMMISSION OF THE PROVIDENCE MEDICAL ASSOCIATION — 1940

Certified milk in Providence during 1940 was obtained from the following farms: Cherry Hill Farm, North Beverly, Mass.; Fairoaks Farm, Lincoln, R. I.; Ferrycliffe Farm, Bristol, R. I.; Hampshire Hills Farm, Wilton, N. H.; Walker-Gordon Farm, Charles River, Mass.

Through the courtesy and cooperation of the Boston Commission we have accepted their certification of two farms from Massachusetts and one from New Hampshire.

Bacteriological and chemical examinations of certified milk are made in the laboratories of Brown University under the supervision of Professor Charles Stuart. The potency tests on the vitamin-D milk have been carried on in the laboratory of Dr. Robert Harris at the Massachusetts Institute of Technology and were found to contain a minimum of 430 U.S.P. units per quart.

All of the herds are under State and Federal supervision and are free from Tuberculosis and Brucella abortus infections.

Certified milk from Sunnyfield Farm, Middletown, R. I. was distributed for seven months by the Brightridge Dairy of East Providence. This distribution has been discontinued for the present.

The annual summer meeting of the Producers and Commission was held in June. Members of the Boston Milk Commission were guests. Dr. Fay of the H. P. Hood Company gave an interesting and instructive talk on the vitamins in milk.

A combined meeting of the Massachusetts and Rhode Island Milk Commissions was held at the Alta Crest Farm, Spencer, Mass. The general topic of discussion was Bangs Disease and its control in the herd. The following regulations were adopted:

1. A clean herd should be blood tested every three months.
2. If any infected animals are found, the herd should be tested every 30 days using 1-50 dilution.
3. All infected cattle must be excluded from the herd.

A meeting of the Producers and the Commission was held in December, 1940. At this time it was voted to continue the use of the Gift package as a means of educating new mothers on the desirability of using certified milk.

Advertising material has been printed in the News Bulletin of the Providence Medical Association to acquaint the members of the profession with the qualities of certified milk. The annual report of the Commission was published in the Rhode Island Medical Journal, and the Providence Medical News.

The Commission is indebted to Dr. Knights, Deputy Inspector of milk of Providence for his continued interest and co-operation during the past year.

The personnel of the Commission includes Harold G. Calder, M.D., Chairman, Reuben C. Bates, M.D., Secretary and Treasurer, Henry E. Utter, M.D., Reginald A. Allen, M.D., George W. Waterman, M.D., Halsey DeWolf, M.D., Arthur R. Newsam, M.D., Maurice Adelman, M.D., and Raymond L. Webster, D.M.D. of the Rhode Island State Dental Society.

MONTHLY AVERAGES OF CERTIFIED MILK FOR 1940

	CHERRY HILL H. P. Hood			FAIROAKS			FERRYCLIFFE				HAMPSHIRE HILLS			WALKER-GORDON			SUNNYFIELD		
	B.F.	T.S.	Bacteria per C.C.	B.F.	T.S.	Bacteria per C.C.	Pasteurized	B.F.	T.S.	Bacteria per C.C.	B.F.	T.S.	Bacteria per C.C.	B.F.	T.S.	Bacteria per C.C.	B.F.	T.S.	Bacteria per C.C.
January	4.2	12.95	1,425	4.4	13.38	1,550	49	5.3	14.89	1,333	4.1	13.01	60	4.1	13.09	2,500			
February	4.2	13.22	1,850	4.3	13.48	1,405	18	5.3	14.71	2,333	4.0	12.94	32	4.0	12.81	2,340			
March	4.0	12.87	1,687	4.5	13.49	1,806	11	5.4	14.83	3,606	4.0	13.04	45	4.0	12.78	2,290	4.1	13.30	2,716
April	4.0	12.84	1,687	4.7	13.93	1,513	26	5.4	15.14	7,416	4.0	13.01	7	4.0	12.63	3,587	4.2	13.16	3,175
May	4.0	12.65	2,110	4.3	13.43	3,075	36	5.5	14.94	10,381	4.1	12.83	8	4.0	12.69	3,710	4.1	13.21	3,900
June	4.2	13.07	2,537	4.3	13.41	4,518	65	5.3	14.69	3,675	3.9	12.57	7	3.9	12.54	4,625	4.1	13.28	1,825
July	4.1	12.78	3,625	4.5	13.57	3,005	77	4.8	14.24	4,097	3.9	12.64	9	3.9	12.47	8,500	4.6	14.22	3,912
August	4.1	12.75	5,340	4.6	13.59	2,094	63	4.8	14.10	2,800	4.1	12.90	5	4.0	12.46	7,410	3.9	13.22	3,220
September	4.0	12.62	3,943	4.8	13.69	3,006	158	5.0	14.26	4,215	4.1	12.93	7	4.0	12.62	4,543	4.2	13.41	1,575
October	4.1	12.90	3,620	4.6	13.66	3,285	142	5.3	14.68	2,775	4.2	13.15	0	4.1	12.73	4,640			
November	4.0	12.75	2,325	4.9	14.10	3,675	71	5.6	15.08	4,243	4.1	13.00	1	4.0	12.92	4,762			
December	4.0	12.65	2,300	4.6	13.81	2,625	50	5.8	15.47	5,725	4.2	13.20	8	4.0	12.80	5,516			
Yearly Average	40.	12.83	2,704	4.5	13.63	2,629	64	5.3	14.75	4,383	4.0	12.93	15	4.0	12.71	4,535	4.2	13.40	2,903